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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,246	01/21/2004	Kia Silverbrook	MPA10US	1590

24011 7590 01/19/2007  
SILVERBROOK RESEARCH PTY LTD  
393 DARLING STREET  
BALMAIN, NSW 2041  
AUSTRALIA

EXAMINER
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MARTIN, LAURA E

ART UNIT	PAPER NUMBER
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2853

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/19/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/760,246

Applicant(s)

SILVERBROOK ET AL.

Examiner

Laura E. Martin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook et al. (US 6349908) in view of Silverbrook (US 20020180834).

#### **Silverbrook et al. discloses the following claim limitations:**

As per claim 1: at least two printhead modules (figure 15, element 10), each comprising at least two printhead integrated circuits (figure 4, element 18), each of which has nozzles formed therein for delivering printing fluid onto the surface of print media (column 3, lines 45-50), and a support member on which the at least two printhead integrated circuits (figure 3, element 32) are fixedly mounted (via elements 42 in figure 3); a casing on which the two printhead modules are arranged as to be removably mounted in linearly aligned relationship (figure 3, element 56), wherein the support member has at least one longitudinally extending channel for carrying the printing fluid for the printhead integrated circuits (column 2, lines 16-27)

As per claim 5, Silverbrook et al. teaches a printhead assembly according to claim 1, wherein: the at least two printhead modules are each formed as a unitary arrangement (figure 15, element 10) of the at least two printhead integrated circuits (figure 4, element 18), the support member (figure 3, element 32), at least one fluid

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distribution member mounting the at least two printhead integrated circuits to the support member, and an electrical connector for connecting electrical signals to the at least two printhead integrated circuits (figure 8, elements 48); and each of the support members has a plurality of apertures (figure 7, element 42) extending from the at least one channel (figure 7, element 80) through a wall of the support member arranged so as to direct the printing fluid from the at least one channel to associated nozzles in both, or if more than two, all of the printhead integrated circuits by way of respective ones of the fluid distribution members (figure 7, column 3, lines 45-47).

**Silverbrook et al. does not disclose the following claim limitations:**

As per claim 1: each printhead module has end portions which permit interconnection of the linearly aligned printhead modules and provide for fluid connection of the channels of the support members thereof.

**Silverbrook discloses the following claim limitations:**

As per claim 1: each printhead module has end portions which permit interconnection of the linearly aligned printhead modules and provide for fluid connection of the channels of the support members thereof [0059].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the printhead taught by Silverbrook et al. with the disclosure of Silverbrook in order to create a higher quality printing apparatus.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook et al. (US 6349908) and Silverbrook (US 20020180834), and further in view of Milan (US 5658158).

**Silverbrook et al. as modified discloses the following claim limitations:**

Silverbrook et al. as modified teaches the printhead assembly of claim 1

**Silverbrook et al. as modified does not disclose the following claim limitations:**

Silverbrook et al. as modified does not disclose end portions comprising complementary female and male end portions.

**Milan discloses the following claim limitations:**

Milan teaches end portions of each of the printhead modules comprise complementary female and male end portions (figures 1 and 3).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the printing apparatus of Silverbrook with the disclosure of Milan in order to create a secure connection within the assembly.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook et al. (US 6439908), Silverbrook (US 20020180834), and Milan (US 5658158), and further in view of Higgins (US 6180002).

**Silverbrook et al. as modified discloses the following claim limitations:**

Silverbrook et al. as modified teaches the printhead assembly of claim 2.

**Silverbrook et al. as modified does not disclose the following claim limitations:**

Silverbrook et al. as modified does not teach a sealing adhesive is provided at the interface of the interconnected printhead modules, wherein the sealing adhesive is an epoxy.

**Higgins as modified discloses the following claim limitations:**

Higgins teaches a sealing adhesive is provided at the interface of the interconnected printhead modules (figure 4, element 66), wherein the sealing adhesive is an epoxy (column 5, line 3).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the printing apparatus of Silverbrook as modified with the sealing adhesive of Higgins in order to create a higher quality and more durable ink cartridge.

***Response to Arguments***

Applicant's arguments with respect to claims 1-5 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura E. Martin whose telephone number is (571) 272-2160. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Laura E. Martin

 1/11/07  
MANISH S. SHAH  
PRIMARY EXAMINER